

## Article

# Understanding Microbial Loads in Wastewater Treatment Works as Source Water for Water Reuse

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**Table S1.** Sample volume collected (SVC), equivalent sample volume analyzed (ESVA)\*\*, and detection limit (DL)\*\* for each testing microorganism.

Sampling Site*	Sample Type	Sample Volume (SVC)	Parasites		Adenovirus		Bacteriophages		Bacterial Indicators	
			ESVA	DL ((oo)cysts/L)	ESVA	DL (MPN/L)	ESVA	DL (PFU/mL)	ESVA	DL (CFU/100 mL)
Influent	Grab	1 L	100–125 mL	8–10	400 mL	2.5	1 mL	1	100 mL	1
	HFUF	100 L	ND	ND	ND	ND	ND	ND	ND	ND
Effluent	Grab	1 L	ND	ND	ND	ND	1 mL	1	100 mL	1
	HFUF	100 L	10–100 L	0.01–0.1	50 L	0.02	250 mL	0.004	ND	ND

\*Influent samples: primary treated wastewater (e.g., primary clarified/settled), Effluent samples: final treated wastewater (e.g., secondary treatment and disinfection). \*\*Calculations were described in Tables 2–4. ND: not determined.

**Table S2.** Median Log<sub>10</sub> reduction values of protozoan parasites through the three wastewater treatment trains. Minimum–Maximum Log<sub>10</sub> values are in parenthesis.

Log Reduction [Log <sub>10</sub> (Inf/eff)]	<i>Cryptosporidium</i> Oocysts	<i>Giardia</i> Cysts
Plant 1 (UV)	1.89 (0.97–3.00)	1.42 (0.11–2.40)
Plant 2 (Chlorine)	2.98 (0.77–5.15)	3.18 (0.81–5.83)
Plant 3 (Chlorine)	1.75 (1.19–2.90)	1.90 (0.53–4.01)

**Table S3.** Median Log<sub>10</sub> inactivation values of human adenovirus and bacteriophages through the three wastewater treatment trains. Minimum–Maximum Log<sub>10</sub> values are in parenthesis.

Log Inactivation [Log <sub>10</sub> (Inf/eff)]	Male Specific Bacteriophage	Somatic Bacteriophage	Human Adenovirus
Plant 1 (UV)	5.54 (3.85–6.26)	5.50 (4.94–5.97)	4.57 (1.15–6.08)
Plant 2 (Chlorine)	6.01 (3.59–6.38)	5.61 (4.33–6.21)	2.91 (1.85–5.85)
Plant 3 (Chlorine)	5.50 (3.32–6.07)	5.29 (3.32–6.49)	3.27 (2.66–5.37)

**Table S4.** Median Log<sub>10</sub> inactivation values of fecal indicator organisms through the three wastewater treatment trains. Minimum–Maximum Log<sub>10</sub> values are in parenthesis.

Log Inactivation [Log <sub>10</sub> (Influent/effluent)]	<i>E. coli</i>	Fecal Coliforms	Total Coliforms	Aerobic Endospores
Plant 1 (UV)	6.02 (4.30–8.35)	5.73 (2.79–7.73)	5.12 (3.82–6.95)	1.45 (0.43–2.91)
Plant 2 (Chlorine)	6.56 (5.30–8.51)	6.58 (5.72–8.38)	5.68 (4.72–7.72)	1.23 (0.40–3.29)
Plant 3 (Chlorine)	6.66 (4.75–8.45)	6.80 (4.88–8.52)	6.16 (2.76–7.42)	1.21 (0.99–2.28)

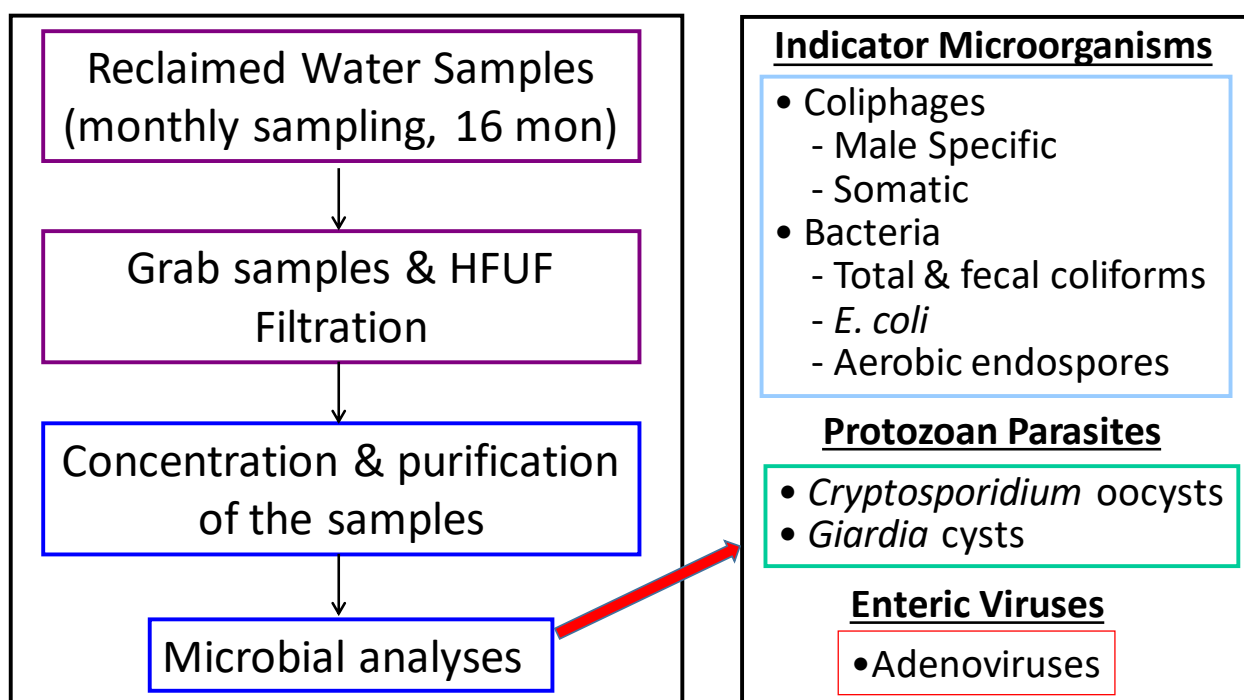


Figure S1. Overview of sampling schedule and microbial parameters measured.

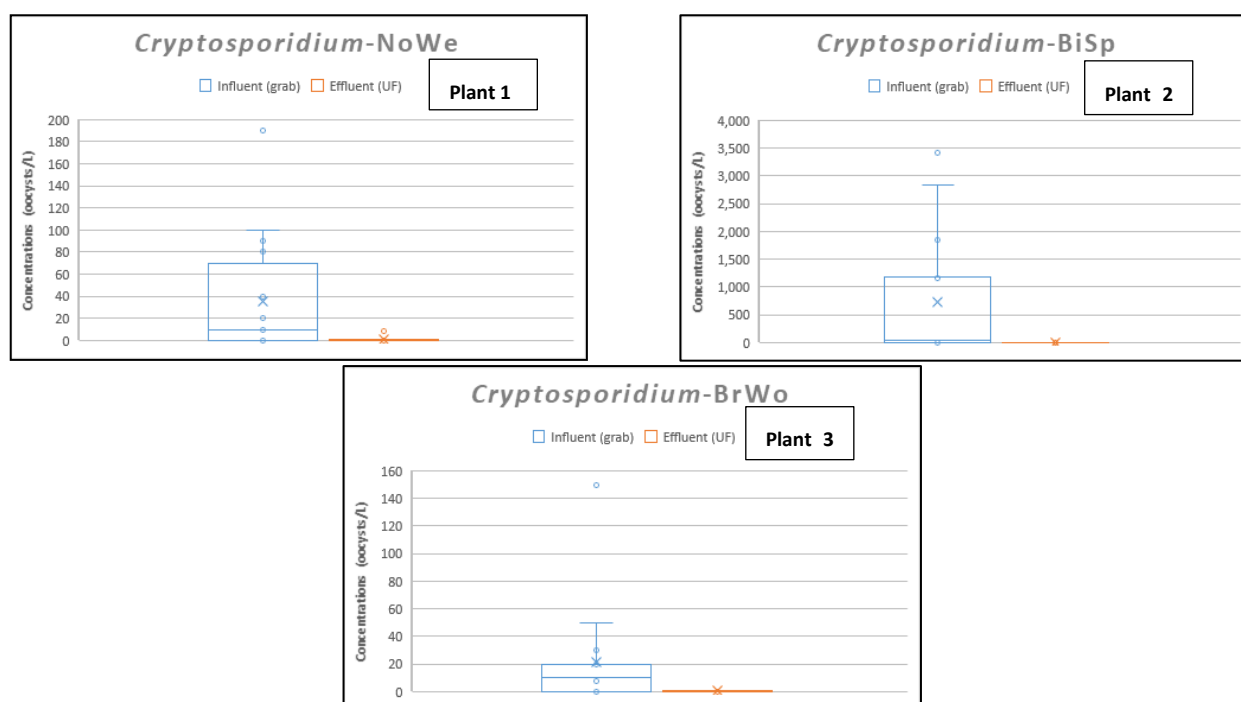
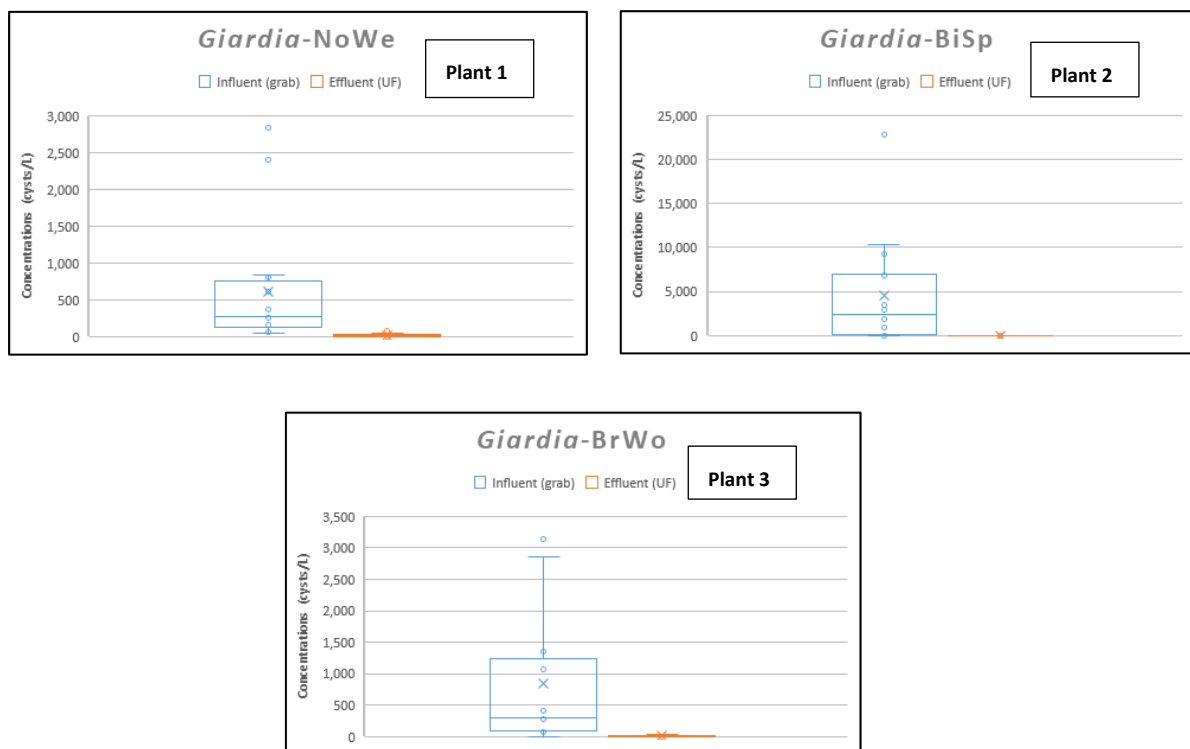
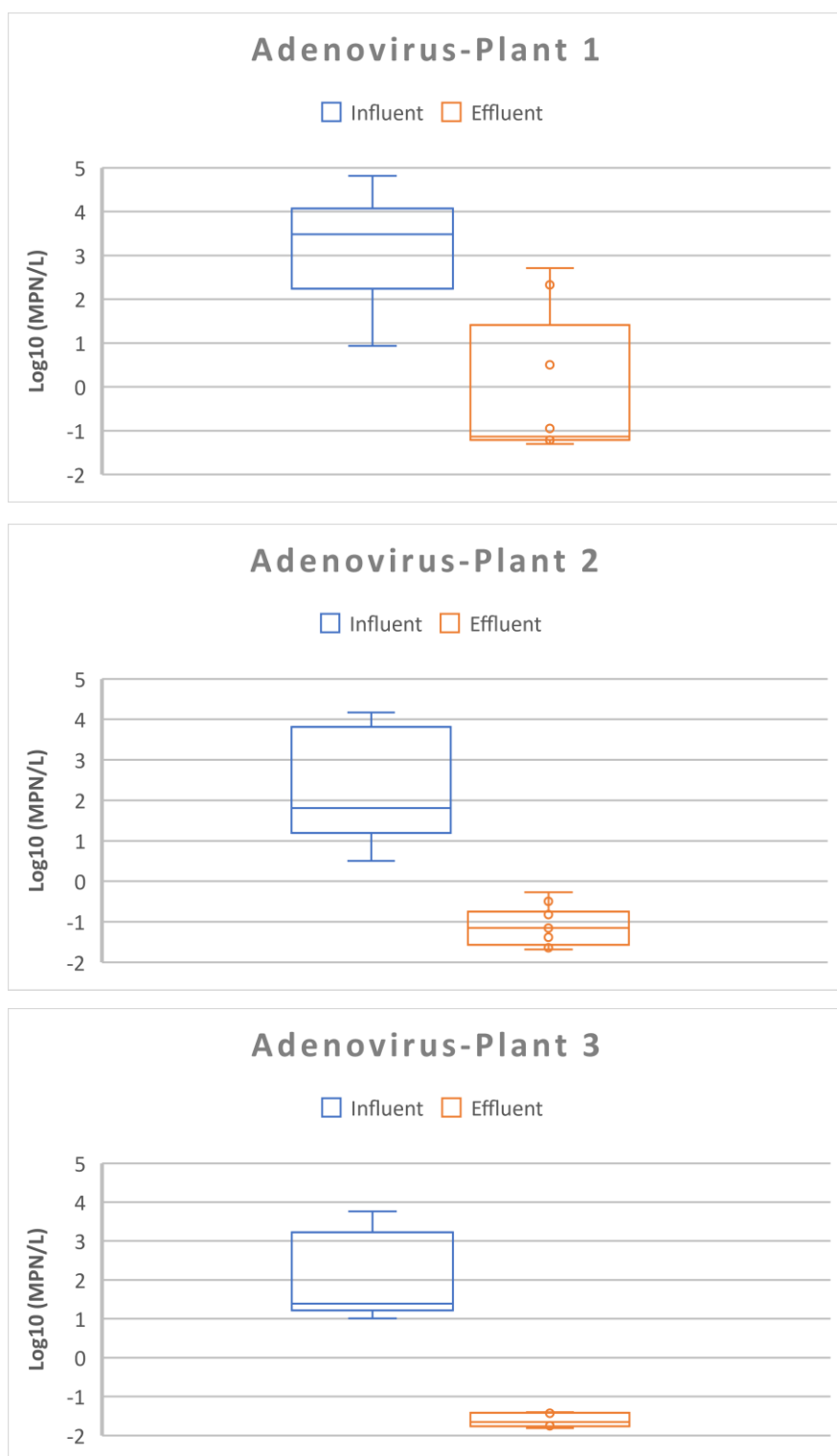


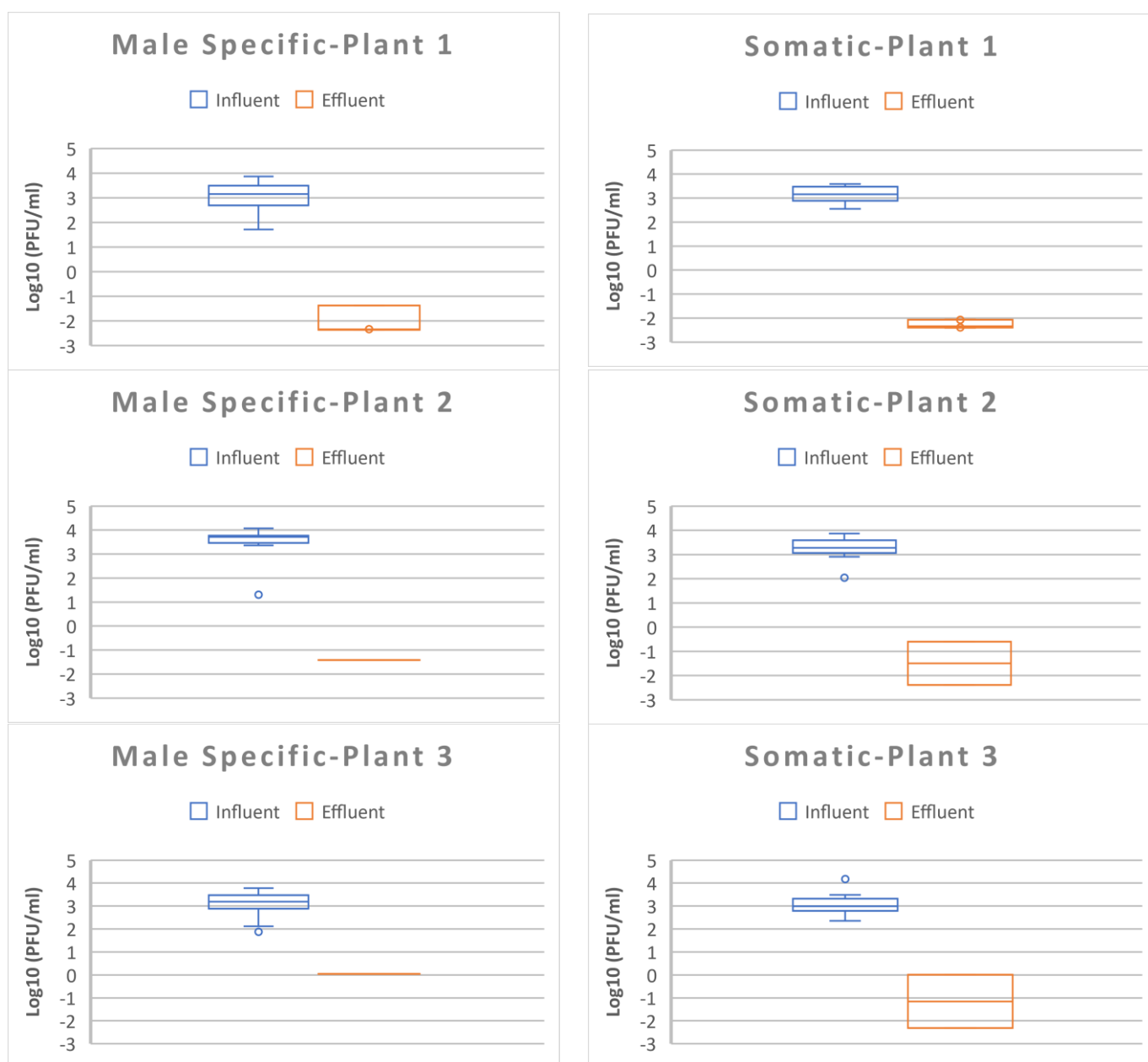
Figure S2. *Cryptosporidium* oocyst concentrations in influent (blue) and effluent (red) wastewater samples.



**Figure S3.** *Giardia* cyst concentrations in influent (blue) and effluent (red) wastewater samples.



**Figure S4.** Log<sub>10</sub> concentrations of infectious human adenovirus in influent (blue) and effluent (red) wastewater samples.



**Figure S5.** Log<sub>10</sub> concentrations of male specific and somatic coliphages in influent (blue) and effluent (red) wastewater samples.